APPARATUS AND METHOD FOR IDENTIFICATION OF A NEW SECONDARY CODE START POINT FOLLOWING A RETURN FROM A SECONDARY CODE EXECUTION

Abstract of the Invention

When an NEW SECONDARY CODE EXECUTION START POINT signal is generated in a target processor during a test procedure after the return from an interrupt service routine (i.e., an original secondary code sequence), a sync marker is generated in a program counter trace stream. The sync marker includes a plurality of packets, the packets identifying that the sync marker is has been generated as a result of the NEW SECONDARY CODE EXECUTION START POINT signal. The new secondary program code start point sync marker identifies the absolute program counter address at the time of the generation of the NEW SECONDARY CODE EXECUTION START POINT signal and relates the NEW SECONDARY CODE EXECUTION START POINT signal sync marker to a timing trace stream. The NEW SECONDARY CODE EXECUTION START POINT signal is generated after the instructions from the original secondary code sequence are removed from the pipeline flattener and the first new secondary code instruction is removed from the pipeline flattener. In this manner, the host processing unit is provided with the initiation and the context of a new secondary code execution.